

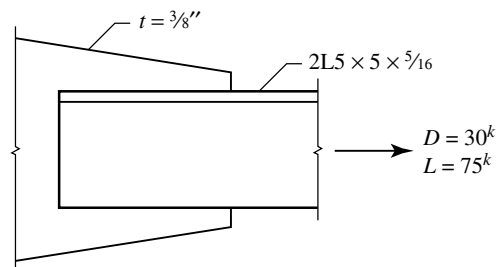
I. Complete the following problems from the textbook:

Chapter 10 – Connection Elements

10-11, 10-24, 10-27

II. Answer the following problems:

1. One leg of an L 8 X 8 X 3/4 angle is to be connected with side welds and a weld at the end of the angle to a plate behind, to develop the loads  $P_D=170k$  and  $P_L=200k$ . Balance the fillet welds around the center of gravity of the angle. Determine weld lengths if E70 electrodes and maximum weld size is used.
2. Design a welded connection for the connection shown below. The given loads are service loads. Use  $F_y$  of 50 ksi for the angle tension member and  $F_y$  of 36 ksi for the gusset plate. Show your results on a sketch with the weld dimensions shown on it.



NOTE: Perform calculations for LRFD only.